6th Biennial Bay–Delta Science Conference

Ecosystem Sustainability: Focusing Science on Managing California's Water Future

September 27–29, 2010
Sacramento Convention Center
1400 J Street
Sacramento, California
http://baydeltascienceconf.com

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The Biennial Bay-Delta Science Conference (formerly known as the CALFED Science Conference) is a forum for presenting technical analyses and results relevant to the Delta Science Program's mission to provide the best possible, unbiased, scientific information for water and environmental decision-making in the Bay-Delta system. The goal of the conference is to provide new information such as study results, model simulations, and analysis and syntheses of data to the broad community of scientists, engineers, resource managers, and stakeholders working on Bay-Delta issues.

The conference program features a mix of plenary and contributed talks and poster presentations on topical themes of interest. The late afternoon poster sessions and receptions provide an opportunity for discussion between presenters and attendees.

Delta Science Program
Delta Stewardship Council

Conference Organizing Committee

Conference Co-Chairs:
David Schoellhamer, USGS
Jay Lund, UC Davis

Program Co-Chairs:
Brian Pellerin, USGS
Erwin Van Nieuwenhuyse, USBR

Poster Co-Chairs:
Darcy Austin, USGS
Josh Israel, USBR

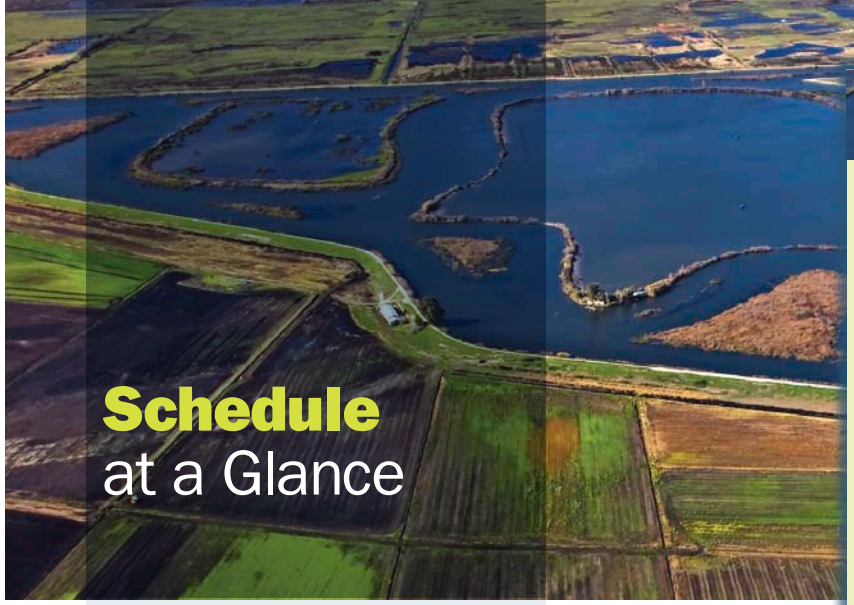
Student Judging Co-Chairs:
Rainer Hoenicke, SFEI
Stephanie Fong, CVRWQCB

Web Chair:
Dusty Boeger, Delta Science Program

Logistics Chair:
Karen McDowell, SFEP

Committee Members:
Eric Alvarez, Delta Stewardship Council
Frances Brewster, SCVWD
Rosalie del Rosario, NMFS
Sam Harader, Delta Science Program
Mike Hoover, USFWS
Campbell Ingram, TNC
Anke Mueller-Solger, IEP
Matt Nobriga, USFWS
Michelle Shouse, USGS
Kim Webb, USFWS

TAKE A LOOK!



Schedule at a Glance

Monday, September 27

Rooms 311–315
Plenary Session

8:00 AM	Registration
9:00 AM	Plenary Session
10:30 AM	**BREAK—3RD FLOOR LOBBY**
10:50 AM	Plenary Session
12:10–1:20 PM	**LUNCH—EXHIBIT HALL B (1ST FLOOR)**

Special Events

Can Art Change Our Water Consciousness?— Environmental Art

Monday, September 27

All day long, 3rd Floor Lobby

Linda Gass makes environmental art about water issues in California. Her most recent series of work is about San Francisco Bay. She will be giving a short presentation during the plenary session, and her landscape quilts will be on display during the first day of the conference.

RiverWebs — A 60-Minute Video Presentation

Monday, September 27

6:45–8:00 PM, Rooms 308–310

RiverWebs takes a close look at an international group of river ecologists who share a story of tragedy, growth, and recovery. The inspiring lives and experiences of these scientists build a rich story of hope and interconnectedness, while providing a personal window through which to view rivers, ecology, and conservation.

Mangling Your Message in the Media: How to Communicate Your Results With Less Consequence and More Impact in a Changing Media Environment

Tuesday, September 28

12:20–1:20 PM, Rooms 308–310

The scientific community is notorious for having difficulty communicating its results to the media. At the same time, scientists complain that the media rarely gets its message right, often with unpleasant consequences. The proliferation of the new media complicates this even more. Join a panel of media experts for a discussion of how to increase your effectiveness.

David Hosley, Great Valley Center; Matt Jenkins, High Country News; Stuart Leavenworth, Sacramento Bee; Craig Miller, KQED; Colin Sullivan, Greenwire/Climatewire; Moderator: Jeffrey Mount, UC Davis

	Room 306 **Water Quality**	Room 307 **Habitats and Restoration**	Room 311-313 **Species and Communities**	Room 314 **Integrated Science and Management**
1:20–3:00 PM	Mercury (I) Jacob Fleck, USGS	The Natural Delta: Pattern and Process before Modern Management Robin Grossinger, SFEI	Bay Delta Phytoplankton Trends and Drivers Anke Mueller-Solger, IEP	Management and Decision Support Victoria Poage, USFWS
3:00–3:20 PM	**BREAK—3RD FLOOR LOBBY**			
3:20–5:00 PM	Mercury (II) Chris Foe, CVRWQCB	Suisun Marsh: Present and Future John Durand, UC Davis	Microcystis in the San Francisco Estuary Peggy Lehman, DWR	Technical Approaches to Suggest Delta Flow Standards Jay Lund, UC Davis
5:00–7:00 PM	**POSTER SESSION AND RECEPTION—EXHIBIT HALL B (1ST FLOOR)**			
6:45–8:00 PM	**Special Event** **SCREENING OF RiverWebs (ROOMS 308–310)**			

Tuesday, September 28

	Room 306 **Water Quality**	Room 307 **Habitats and Restoration**	Room 308-310 **Long-Term Challenges**	Room 311-313 **Species and Communities**	Room 314 **Integrated Science and Management**
8:20–10:00 AM	Sediment Transport Modeling and Observation in the Sacramento–San Joaquin Delta (I) Fabian Bombardelli, UC Davis	South Bay Salt Pond Restoration Project: Integrative Applied Science (I) John Bourgeois, SCC	Fish Migration and Survival (I) Rachel Barnett-Johnson, USBR	Pelagic Organism Decline (I) Randy Baxter, DFG	Tools and Approaches: Biology (I) Lenny Grimaldo, USBR
10:00–10:20 AM	**BREAK—3RD FLOOR LOBBY**				
10:20 AM–12:00 PM	Sediment Transport Modeling and Observation in the Sacramento-San Joaquin Delta (II) Jamie Anderson, DWR	South Bay Salt Pond Restoration Project: Integrative Applied Science (II) Laura Valoppi, USGS	Fish Migration and Survival (II) John Hannon, USBR	Pelagic Organism Decline (II) Randy Baxter, DFG	Tools and Approaches: Biology (II) Tamara Kraus, USGS
12:00–1:35 PM	**LUNCH—EXHIBIT HALL B (1ST FLOOR)**				
12:20–1:20 PM	**Special Event MANGLING YOUR MESSAGE IN THE MEDIA,** MODERATOR: JEFFREY MOUNT, UC DAVIS **(ROOMS 308–310)**				
1:35–3:15 PM	Sediment Transport Modeling and Observation in the Sacramento-San Joaquin Delta (III) Lester McKee, SFEI	Sustainable Habitats (I) Campbell Ingram, TNC	Fish Migration and Survival (III) Pat Brandes, USFWS	Pelagic Organism Decline (III) Ted Sommer, DWR	Tools and Approaches: Physical Bryan Downing, USGS
3:15–3:35 PM	**BREAK—3RD FLOOR LOBBY**				
3:35–5:15 PM	Contaminants Kelly Smalling, USGS	Sustainable Habitats (II) Rhonda Reed, NMFS	Fish Physiology and Behavior Matt Nobriga, USFWS	Pelagic Organism Decline (IV) Ted Sommer, DWR	Multi-dimensional Modeling of the Bay-Delta William Fleenor, UC Davis
5:15–7:15 PM	**POSTER SESSION AND RECEPTION—EXHIBIT HALL B (1ST FLOOR)**				

Wednesday, September 29

8:20–10:00 AM	Emerging Contaminants Stephanie Fong, CVRWQCB	Cache Slough Complex (I) Peter Hrodey, USFWS	Addressing Climate Change in Delta Planning and Management (I) John Andrew, DWR	Food Webs (I) Swee Teh, UC Davis	Carbon Sequestration and Gas Fluxes Frank Anderson, USGS
10:00–10:20 AM	**BREAK—3RD FLOOR LOBBY**				
10:20 AM–12:00 PM	Pesticides Amanda Montgomery, CVRWQCB	Cache Slough Complex (II) Gina Benigno, DWR	Addressing Climate Change in Delta Planning and Management (II) Elissa Lynn, DWR	Food Webs (II) Michelle Shouse, USGS	Invasives Ronald Smith, USFWS
12:00–1:00 PM	**LUNCH—EXHIBIT HALL B (1ST FLOOR)**				
1:00–2:40 PM	Nutrients Sam Harader, Delta Science Program	River and Wetland Restoration Mark Gard, USFWS	Addressing Climate Change in Delta Planning and Management (III) Jamie Anderson, DWR	Species and Communities (I) Larry Brown, USGS	Human Modified Systems Darcy Austin, USGS
2:40–3:00 PM	**BREAK—3RD FLOOR LOBBY**				
3:00–4:40 PM	Nutrients and Organic Matter Cliff Dahm, Delta Science Program	Restoration and Fish John Netto, USFWS	Addressing Climate Change in Delta Planning and Management (IV) Tapash Das, Scripps Institute of Oceanography	Species and Communities (II) Isa Woo, USGS	
4:40–4:45 PM	**EVALUATION FORM SUBMISSION AND RAFFLE (3RD FLOOR LOBBY)**				

Monday, September 27

Plenary Session Rooms 311–315

9:00 AM **Welcome**
Jay Lund, UC Davis

9:10 AM **Does Science Push Policy or Just Follow Along?**
Phil Isenberg, Chairman, Delta Stewardship Council

9:30 AM **Science for a More Sustainable Delta: Challenges for the Future**
Cliff Dahm, Lead Scientist, Delta Science Program

9:50 AM **From Sequestration to Smelt: Cutting Edge Science Solving Bay-Delta Problems**
Anne Castle, Assistant Secretary for Water and Science, U.S. Department of the Interior

10:10 AM **Brown-Nichols Science Award**

10:30 AM **BREAK—3RD FLOOR LOBBY**

10:50 AM **Development of a Biological Monitoring Program for the Lower Mekong River, Southeast Asia**
Vince Resh, Professor of Entomology, Department of Environmental Science, Policy and Management, University of California, Berkeley

11:20 AM **The Bay-Delta: Conservation and Management in a Labyrinth**
John Wiens, Emeritus University Distinguished Professor, Colorado State University; Chief Conservation Science Officer, PRBO Conservation Science

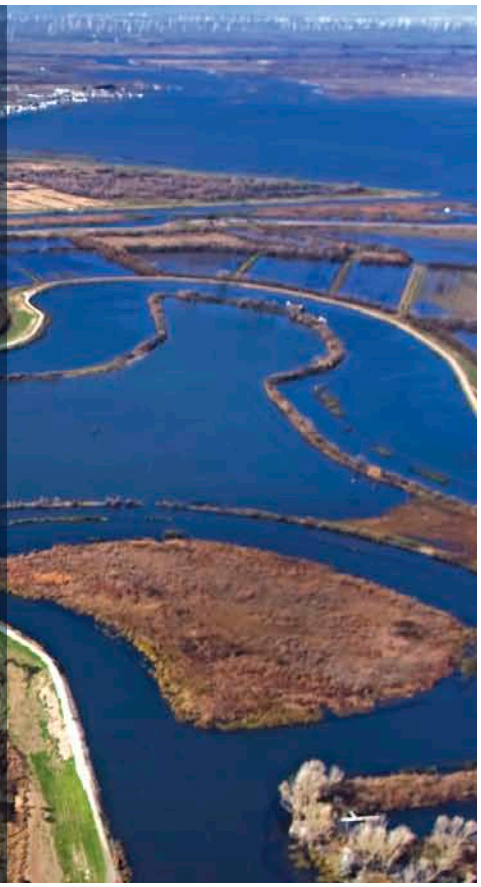
11:50 AM **Communicating Science To The Public**

Can Art Change Our Water Consciousness?
Linda Gass, Artist in Residence, Palo Alto Cubberley Studios

Special Event Preview: Mangling Your Message in the Media
Jeffrey Mount, UC Davis

RiverWebs Video Preview

12:10 PM **LUNCH—EXHIBIT HALL B (1ST FLOOR)**



	Room 306 **Water Quality**	Room 307 **Habitats and Restoration**	Rooms 311–313 **Species and Communites**	Room 314 **Integrating Science and Management**
	Mercury (I) Jacob Fleck, USGS	**The Natural Delta: Pattern and Process before Modern Management** Robin Grossinger, SFEI	**Bay Delta Phytoplankton Trends and Drivers** Anke Mueller-Solger, IEP	**Management and Decision Support** Victoria Poage, USFWS
1:20 PM	Conceptual Model of Mercury in Tomales Bay Carrie Austin, SFWQCB	Salinity Conditions in the Bay and Delta: Natural Variability and Anthropogenic Influence Greg Gartrell, Conta Costa Water District	Changes in the Quality and Quantity of Nutrients over Time and the Relationships with Changes in Phytoplankton Composition Pat Glibert, UMCES	Multi-scale, Integrated Reporting System for Bay-Delta Regions Fraser Shilling, UC Davis
1:40 PM	Assessing Impairment of Tomales Bay due to Mercury Kat Ridolfi, SFEI	Modeling the Historical Delta William Fleenor, UC Davis	Causes of Seasonal and Spatial Variation in Water Chemistry in the Sacramento River, Delta, and Eastern San Francisco Bay and Their Effects on Chlorophyll Levels Carol Kendall, USGS	Achieving the California Water Supply and Delta Ecological Improvement Simultaneously Stacy Li, Aquatic Systems Research
2:00 PM	Methylmercury Export from a Restored Tidal Marsh: Crissy Field, Golden Gate National Recreation Area, San Francisco, CA Lisamarie Windham-Myers, USGS	Hydrodynamics and Transport Processes on the Historical Landscape: Geomorphic Control of Functional Complexity and Implications for Restoration Christopher Enright, Delta Science Program	Different Response Types of Phytoplankton to Changing Nutrient Regimes in Suisun Bay: Bottom-Up Effects of Ammonium and Nitrate Frances Wilkerson, SF State University – RTC	Integrated Water Operations and Ecosystem Decision Support Modeling: The Ecological Flows Tool (EFT) Campbell Ingram, TNC

Monday, September 27 (*continued*)

	Room 306 **Water Quality**	Room 307 **Habitats and Restoration**	Rooms 311–313 **Species and Communites**	Room 314 **Integrating Science and Management**
2:20 PM	Monitoring Methylmercury at the Base of Aquatic Food Webs: A Bottom Up, Integrated Approach for Assessing Change in Mercury Bioavailability in Nature Amy Kleckner, USGS	Historical Habitat Variability and Complexity in the Upper San Francisco Estuary John Durand, UC Davis	How Well Do We Understand the Feeding Ecology of Estuarine Mesozooplankton? A Survey of the Direct Evidence Diana Engle, Larry Walker Associates	Assessing the Potential Restoration Impacts to Local Water Users in the Cache Slough Complex: A Modeling Approach Alexander Rabidoux, Solano County Water Agency
2:40 PM	A Preliminary Framework for Monitoring Mercury in Wetland Projects: Tidal Marsh Mercury Biosentinels as Adaptive Management Tools Letitia Grenier, SFEI	Historical Delta Habitat Mosaics: Conceptual Models for Building a Diverse and Resilient Future Delta Robin Grossinger, SFEI	Using Climatological Anomalies to Understand the Occurrence of Spring Blooms in Suisun Bay Richard Dugdale, SF State University – RTC	Understanding the Strategies and Decision Making of California's Urban Water Agencies Sara Hughes*, UC Santa Barbara
3:00 PM	**BREAK—3RD FLOOR LOBBY**			
	Mercury (II) Chris Foe, CVRWQCB	**Suisun Marsh: Present and Future** John Durand, UC Davis	**Microcystis in the San Francisco Estuary** Peggy Lehman, DWR	**Technical Approaches to Suggest Delta Flow Standards** Jay Lund, UC Davis
3:20 PM	Guadalupe River Watershed Model: Support Tool for Regional Hg and PCB Management Michelle Lent, SFEI	Suisun Marsh Ecosystem Function 1979-2010: A Review of Trends in Environmental Conditions, the Food Web, and Fish Abundance John Durand, UC Davis	Factors that Have Influenced the Increase of Microcystis Blooms in the San Francisco Estuary Since 2003 Peggy Lehman, DWR	Delta Flow Criteria: Regulatory Agency Synthesis of the Science Les Grober, SWRCB
3:40 PM	A New Way of Looking at Contaminants in the Delta--Using the RMA Particle Tracking Model to Assess the Fate and Transport of Methyl Mercury in the Delta Mark Stephenson, DFG	Sex, Clones, and Suisun Marsh: Genetic Diversity and Reproductive Mode in Two Species of Invasive Hydromedusae in the Upper San Francisco Estuary Mariah Meek, UC Davis	What Controls Microcystis Bloom and Toxicity in the San Francisco Bay-Delta? Cecile Mioni, UCSC	Developing Flow Criteria to Protect Public Trust Resources in the Sacramento-San Joaquin Delta Christina Swanson, The Bay Institute
4:00 PM	Assessment of the Potential for Using Iron Amendments to Decrease Net Methylmercury Exports from Tidal Wetlands in San Francisco Bay Patrick Ulrich*, UC Berkeley	Life History and Population Dynamics of *Moerisia* Sp., A Non-Native Hydrozoan in the Upper San Francisco Estuary Alpa Wintzer, UC Davis	Use of Stable Isotopes for Evaluating Environmental Conditions Associated with Microcystis Blooms in the Delta Carol Kendall, USGS	Environmental Flows for Native Fishes Jay Lund, UC Davis
4:20 PM	Best Management Practices to Reduce Methylmercury Concentrations and Exports from Seasonal Wetlands in the Yolo Wildlife Area, California Wesley Heim, Moss Landing Marine Laboratories	Distribution and Implications of Alien Clams in Suisun Marsh, CA Robert Schroeter, UC Davis	Microcystis in the San Francisco Estuary: Abundance of Toxic and Nontoxic Strains, Initial Establishment of Laboratory Cultures, and Localization in Fish Exposed to Blooms and Spiked Diets Dolores Baxa, UC Davis	Application of Dynamic Regime Theory to Assess the Extent of Estuarine Ecosystem Change: Oh, You Don't Know, The Shape I'm In Bill Bennett, UC Davis
4:40 PM	**Q & A**	Strategy for Resolving Methylmercury and Low Dissolved Oxygen Events in Northern Suisun Marsh Stuart Siegel, Wetlands and Water Resources, Inc.	Effects of *Microcystis aeruginosa* on Threadfin Shad, *Dorosoma petenense* Shawn Acuna*, UC Davis	Historical Context for Delta Flow and Salinity Standards Greg Gartrell, Contra Costa Water District
5:00–7:00 PM	**POSTER SESSION AND RECEPTION—EXHIBIT HALL B (1ST FLOOR)**			
6:45–8:00 PM	**Special Event** **RiverWebs— A 60-MINUTE VIDEO PRESENTATION (ROOMS 308–310) (See special events on page 2 for more details)**			

** Denotes student presenter*

Tuesday, September 28

	Room 306 **Water Quality**	Room 307 **Habitats And Restoration**	Room 308–310 **Long–Term Challenges**	Room 311–313 **Species And Communities**	Room 314 **Integrated Science And Management**
	Sediment Transport Modeling and Observation in the Sacramento-San Joaquin Delta (I) Fabian Bombardelli, UC Davis	**South Bay Salt Pond Restoration Project: Integrative Applied Science (I)** John Bourgeois, SCC	**Fish Migration and Survival (I)** Rachel Barnett-Johnson, USBR	**Pelagic Organism Decline (I)** Randy Baxter, DFG	**Tools and Approaches: Biology (I)** Lenny Grimaldo, USBR
8:20 AM	Sacramento River Sediment Sources, Transport, and Supply to the Delta Scott Wright, USGS	Overview of the South Bay Salt Pond Restoration Project and Applied Science for an Adaptive Management Plan Laura Valoppi, South Bay Salt Pond Restoration Project	Proportion of Hatchery-Origin Fish among Feather River Chinook Salmon Spawners, 2002-2008 James Hobbs, UC Davis	Are Juvenile Longfin Smelt Abandoning the Suisun Bay Neighborhood?... the Rest of the Story Randall Baxter, DFG	Developing Real Time Quantitative PCR (Q-PCR) for Rapid and Reliable Identification of Delta Fish and Invertebrates Gregg Schumer, Cramer Fish Sciences
8:40 AM	An Observed Step Change in Delta Turbidity Following 1982-1983 El Nino Floods Erin Hestir, UC Davis	Sediment Flux in the Southern Reach of San Francisco Bay: Implications for Habitat Restoration Gregory Shellenbarger, USGS	Quantifying the Contribution of Juvenile Migratory Phenotypes in a Population of Chinook Salmon *Oncorhynchus tshawytscha* Jessica Miller, Oregon State University	The Spawning Migration of Delta Smelt in the Upper San Francisco Estuary Ted Sommer, DWR	An Integrated Genetic Stock Identification and Parentage-Based Tagging Program for Chinook Salmon Using SNPs Anthony Clemento*, UC Santa Cruz
9:00 AM	Comprehensive Geomorphic and Sedimentation Analyses of Lower Sacramento River Shows Promise for Sediment Budget Modeling of the Delta Brad Hall, Northwest Hydraulic Consultants	Using Remote Sensing to Map the Evolution of Marsh Vegetation in the South Bay of San Francisco Brian Fulfrost, Design, Community and Environment	Pathways, Timing and Rates of Migration for Hatchery and Natural Origin Steelhead, *Oncorhynchus mykiss*, from the Lower Mokelumne River, CA Casey Del Real, East Bay MUD	Reconstructing Inter-Annual Variability of Delta Smelt Life History with Otoliths James Hobbs, UC Davis	Progress in Molecular Discrimination among California's Chinook Salmon Runs: Contrasting Microsatellites, Clock-genes and SNPs Michael Banks, Oregon State University
9:20 AM	Model Based Interpretation of Sediment Concentration and Vertical Flux Measurements in the Shoals of South San Francisco Bay Andreas Brand, UC Berkeley	Sediment Dynamics at the Island Ponds: Indications from Early Salt Pond Restoration John Callaway, USF	Post-Rescue Monitoring of Butte Creek Spring-Run Chinook Salmon Chris Mosser*, UC Davis	Conservation Genetics of Longfin Smelt Joshua Israel, U.S. Bureau of Reclamation	Comprehensive Constant Fractional Marking Program for Central Valley Fall-run Chinook Salmon Alice Low, DFG
9:40 AM	Uncertainty Analysis for Geomorphic Modeling Phillip Mineart, URS Corporation	Will Restoration Cause Loss of Mudflats in South San Francisco Bay? Bruce Jaffe, USGS	When to Bolt? Fry or Smolt: Reconstructing the Survivorship of Juvenile Migratory Life Histories for Chinook Salmon on the Stanislaus River Relative to Flow Regimes Rachel Barnett-Johnson, US Bureau of Reclamation/UC Santa Cruz	More Big Bass: Understanding the Role of Largemouth Bass as Top Predators in the Littoral Zone Louise Conrad, DWR	Conservation Genetics of Delta Smelt (*Hypomesus transpacificus*): Population Genetics, Hybridization & Captive Population Genetic Management Kathleen Fisch*, UC Davis & UC San Diego
10:00 AM	**BREAK—3RD FLOOR LOBBY**				
	Sediment Transport Modeling and Observation in the Sacramento-San Joaquin Delta (II) Jamie Anderson, DWR	**South Bay Salt Pond Restoration Project: Integrative Applied Science (II)** Laura Valoppi, USGS	**Fish Migration and Survival (II)** John Hannon, USBR	**Pelagic Organism Decline (II)** Randy Baxter, DFG	**Tools and Approaches: Biology (II)** Tamara Kraus, USGS
10:20 AM	Three-Dimensional Modeling of Sediment Dynamics in San Francisco Bay Using the SUNTANS Model Oliver Fringer, Stanford University	Effects of Management on Avian Populations in the South Bay Salt Ponds: Density Changes from 2003-2010 L. Arriana Brand, USGS	A Synthesis of 22 Telemetry Studies to Evaluate Chinook Salmon Smolt Migration and Mortality in California's Sacramento—San Joaquin Delta David Vogel, Natural Resource Scientists, Inc.	Fine-Scale Movement of Largemouth Bass, an Introduced Predator Anna Steel*, UC Davis	Forecasting Fish Response to Levee Repair Features of the Sacramento River Bank Protection Project Brian Mulvey, U.S. Army Corps of Engineers

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Tuesday, September 28 (*continued*)

	Room 306 **Water Quality**	Room 307 **Habitats And Restoration**	Room 308–310 **Long–Term Challenges**	Room 311–313 **Species And Communities**	Room 314 **Integrated Science And Management**
10:40 AM	Sediment Transport and Vegetation Growth Simulation on the San Joaquin River Blair Greimann, U.S. Bureau of Reclamation	Increase of the California Gull Population in the San Francisco Bay and the Impacts on Western Snowy Plovers Caitlin Robinson-Nilsen, San Francisco Bay Bird Observatory	Survival and Route Selection of Juvenile Chinook Salmon in the Southern Sacramento-San Joaquin River Delta, 2009 Rebecca Buchanan, University of Washington	Detecting Predation of Larval Delta Smelt by Mississippi Silversides and other Predators Using Genetic Analysis of Gut Contents Brian Schreier, DWR	Bay Area Base Map of Aquatic Resources Meredith Williams, SFEI
11:00 AM	Technical Details of the Development of a Sediment-Transport Module for DSM2 Fabian Bombardelli, UC Davis	Mercury Bioaccumulation and Toxicity to Birds in San Francisco Bay Estuary Josh Ackerman, USGS	Habitat–Species Associations and Behavior of Outmigrating Juvenile Steelhead (*Oncorhynchus mykiss*) and Chinook Salmon (*O. tshawytscha*) in the Lower Sacramento River, California Peter Nelson, H.T. Harvey & Associates	Bioenergetic Modeling of San Francisco Estuary Striped Bass Erik Loboschefsky*, UC Davis	Multiscale Validation of a Spatially Explicit Demographic Model of Fremont Cottonwood on the Sacramento River Elizabeth Harper, SUNY-ESF
11:20 AM	Experience Modeling Turbidity in the Sacramento-San Joaquin Delta for the 2009-2010 Winter Season Marianne Guerin, Resource Management Associates	Monitoring the Response of Fish Assemblages to Restoration in the South Bay Salt Ponds James Hobbs, UC Davis	An Experimental Evaluation of Flow and Predation Effects on the Survival of Juvenile Chinook Salmon Kristopher Jones, Cramer Fish Sciences	Feeding, Growth, and Survival of Larval Delta Smelt: Impacts of Introduced Prey Lindsay Sullivan, SF State University – RTC	Modeling Riparian Forest Establishment on the Sacramento River Charles Young, Stockholm Environment Institute
11:40 AM	Sediment Modeling for the Delta Islands and Levees Feasibility Study William McAnally, US Army Corps of Engineers	Public Access and Waterbirds: Research Managers Can Use Lynne Trulio, San Jose State University	Evaluating Consequences of Unscreened Diversions on Population Performance of Butte Creek Spring-Run Chinook Salmon Greg Blair, ICF Jones & Stokes	Biogeochemical Processing of Anthropogenic Ammonium in the Sacramento River and the Northern San Francisco Estuary Alexander Parker, SF State University–RTC	SRH-1DV Vegetation Modeling of the Sacramento River Lisa Fotherby, U.S. Bureau of Reclamation
12:00–1:35 PM	**LUNCH—EXHIBIT HALL B (1ST FLOOR)**				
12:20 PM	**Special Event** **MANGLING YOUR MESSAGE IN THE MEDIA (ROOMS 308–310), Moderator: Jeffrey Mount, UC Davis** **(See special events on page 2 for more details)**				
	Sediment Transport Modeling and Observation in the Sacramento-San Joaquin Delta (III) Lester McKee, SFEI	**Sustainable Habitats (I)** Campbell Ingram, TNC	**Fish Migration and Survival (III)** Pat Brandes, USFWS	**Pelagic Organism Decline (III)** Ted Sommer, DWR	**Tools and Approaches: Physical** Bryan Downing, USGS
1:35 PM	A Re-Assessment of the Historic Changes in Sediment Flows into San Francisco Bay Andrew Cohen, CRAB	Exceptional Tides, Devastating Effects: Tidal Marsh Dynamics and Species' Habitats Kyle Spragens, USGS	Effects of Tides, River Flow, and Gate Operations on Entrainment of Juvenile Chinook Salmon into the Interior Sacramento-San Joaquin Delta Russell Perry*, University of Washington	The Pelagic Foodweb of the upper San Francisco Estuary: Changing Conditions and Changing Understanding Wim Kimmerer, SF State University – RTC	Development of a Transverse Circulation in a Shoal-Channel System under Partially Stratified Conditions Audric Collignon*, UC Berkeley
1:55 PM	Environmental Impacts and Regulatory Implications of the Apparent Expulsion of the Hydraulic Mining Era Pulse of Mercury Laden Sediment from San Francisco Bay Scott Bodensteiner, Weston Solutions Inc.	Thermal Variability within a Complex Branching Estuarine System Wayne Wanger*, UC Berkeley	Concept of Potential Entrainment Index (PEI) and its Applications for the Sacramento-San Joaquin Delta Management Kijin Nam, DWR	Turbidity Declines and Submerged Aquatic Vegetation Expansion in the Sacramento – San Joaquin Delta Erin Hestir*, UC Davis	Improved Agricultural Water Use Modeling in California Using Remote Sensing Josue Medellin-Azuara, UC Davis
2:15 PM	New Estimates of Suspended Sediment Loads to San Francisco Bay Lester McKee, SFEI	Spatial Climate Change Scenarios for San Francisco Bay Tidal Marsh Habitats Diana Stralberg, PRBO Conservation Science	Evaluation of Fish Facility Efficiency and Pre-Screen Loss for Delta Smelt in the State Water Project Gonzalo Castillo, USFWS	Water Toxicity Monitoring in the Sacramento-San Joaquin Delta, California: 2006-2010 Linda Deanovic, UC Davis	Levee Stability Parameterization from Airborne Lidar and Hyper spectral Sensors in the Sacramento-San Joaquin River Delta Jaylee Tuil, UC Davis

** Denotes student presenter*

Tuesday, September 28 (*continued*)

	Room 306 **Water Quality**	Room 307 **Habitats And Restoration**	Room 308–310 **Long–Term Challenges**	Room 311–313 **Species And Communities**	Room 314 **Integrated Science And Management**
2:35 PM	Suspended-Sediment Flux in the Shallows of South San Francisco Bay Jessica Lacy, USGS	Preliminary Results of a Paleosalinity Model for the Sacramento–San Joaquin Delta Judith Drexler, USGS	Evaluation of Predation at Salvaged Fish Release Sites Javier Mirando, DWR	Molecular Biomarkers in Endangered Species: Responses to Sublethal Ammonia Exposure in the Endangered Delta Smelt; *Hypomesus transpacificus* (Fam. Osmeridae) Richard Connon, UC Davis	Using Time Series Data for Scalar Field Interpolations David Osti, 34 North
2:55 PM	Measurements of Water Column and Sediment Bed Interactions in the South San Francisco Bay Estuary Steven Gladding*, UC Berkeley	Getting to the Bottom of It: Planning for Subtidal Habitats in San Francisco Bay Marilyn Latta, SCC	Translating Fish Salvage at the Delta Pumps into Abundance of Chinook Salmon Smolts Steven Cramer, Cramer Fish Sciences	Effects of Maternal Size and Interactions of Temperature, Pesticide, and Starvation on the Growth and Survival of Larval Delta Smelt Swee Teh, UC Davis	How Well Do You Know Your Light Attenuation Coefficient? A Cautionary Tale of Two PAR Sensors Tara Schraga, USGS
3:15 PM	**BREAK—3RD FLOOR LOBBY**				
	Contaminants Kelly Smalling, USGS	**Sustainable Habitats (II)** Rhonda Reed, NMFS	**Fish Physiology and Behavior** Matt Nobriga, USFWS	**Pelagic Organism Decline (IV)** Ted Sommer, DWR	**Multi-dimensional Modeling of the Bay-Delta** William Fleenor, UC Davis
3:35 PM	Concentrations and Loads of Trace Contaminants in the Zone 4 Line a Small Tributary, Hayward, California: Water Years 2007-2010 Alicia Gilbreath, SFEI	Building a (more) Sustainable Delta: Lessons from Plants Jeff Hart, Hart Restoration, Inc.	Fine Scale Movement, Life History and Survival of Wild *Oncorhynchus mykiss* of the Mokelumne River, CA Walter Heady*, UC Santa Cruz	What Really Happened to Delta Smelt? Water Exports and Habitat Conditions Drive Patterns of Selective Mortality at Ecological and Possibly Evolutionary Scales Bill Bennett, UC Davis	Comparison of Models for Predicting Flow and Water Quality in the Sacramento-San Joaquin Delta Fabian Bombardelli, UC Davis
3:55 PM	Copper Runoff to San Francisco Bay from Brake Pad Wear Debris —Phase 2 Watershed Modeling Analyses Anthony Donigian, AQUA TERRA Consultants	Sediment Transport Issues in Stream Restoration -- 12 Years of Geomorphic Monitoring in Lower Clear Creek Smokey Pittman, Graham Matthews and Associates	Environmental Disruption in the Thyroid Endocrine System of Wild Fish in San Francisco Bay Kevin Kelley, CSU Long Beach	Application of an Individual Based Model of San Francisco Estuary Striped Bass to Explore Possible Mechanisms Associated with the Observed Disconnect Between Juvenile and Adult Population Estimates Erik Loboschefsky*, UC Davis	Particle Tracking Based Estimates of Recruitment of Organisms from the Coastal Ocean into the Low-Salinity Zone of the San Francisco Estuary Edward Gross, Bay Modeling
4:15 PM	The Occurrence of Indicator Bacteria and Waterborne Zoonotic Pathogens in the California Delta Ronald Bond, UC Davis	The Influence of Lateral Exchange with Perimeter Habitat on the Stratification and Mixing of Salt in a Tidal Channel Lissa MacVean*, UC Berkeley	A Kinetic Analysis of Se Uptake, Distribution and Excretion in White Sturgeon Susie Huang*, UC Davis	Using an Individual-based Model to Evaluate the Factors Affecting Population Dynamics of Delta Smelt Kenneth Rose, Louisiana State University	The Need for Speed: 3-D Hydrodynamic and Salinity Simulations using the UnTRIM Bay-Delta Model Michael MacWilliams, River Modeling
4:35 PM	Effects of Waterborne Lipophilic Contaminants from Locations in the San Francisco Estuary on Resident Fish David Ostrach, UC Davis	Floodplain Reconnection Potential on the San Joaquin River at Great Valley Grassland State Park, Merced County, California Mark Tompkins, NewFields River Basin Services	Depth Shifts: Consequences to the Striped Bass Population in the San Francisco Estuary, California Robert Schroeter, UC Davis	An Ecotrophic-based Model of the Sacramento-San Joaquin Delta Marissa Bauer, USGS	Local and Delta-Wide Hydrodynamic Impacts of Large Scale Tidal Marsh Restoration John DeGeorge, Resource Management Associates Inc.
4:55 PM	Use of a Resident Fish for Assessment of Endocrine Disruption at Selected Sites in the Sacramento-San Joaquin Delta Bryan Cole, UC Davis	Critical Role of Seasonal Tributaries for Native Fish and Aquatic Biota in the Sacramento River Michael Marchetti, CSU Chico	Mating Call of the Plainfin Midshipman as an Indicator of Stress due to Anthropogenic Noise and Other Environmental Factors Roger Bland, SF State University	Collaborative Workgroup Efforts to Model Species, Stressors, and Processes in the Upper San Francisco Estuary Erica Fleishman, UC Santa Barbara	Flooded Island Ecosystems: Physical Drivers of Biological Productivity Following Levee Breaches on Sacramento-San Joaquin Delta Islands Laura Doyle, UC Davis
5:15-7:15 PM	**POSTER SESSION AND RECEPTION—EXHIBIT HALL B (1ST FLOOR)**				

** Denotes student presenter*

Wednesday, September 29

	Room 306 **Water Quality**	Room 307 **Habitats And Restoration**	Room 308–310 **Long-Term Challenges**	Room 311–313 **Species And Communities**	Room 314 **Integrated Science And Management**
	Emerging Contaminants Stephanie Fong, CVRWQCB	**Cache Slough Complex (I)** Peter Hrodey, USFWS	**Addressing Climate Change in Delta Planning and Management (I)** John Andrew, DWR	**Food Webs (I)** Swee Teh, UC Davis	**Carbon Sequestration and Gas Fluxes** Frank Anderson, USGS
8:20 AM	Occurrence, Fate and Transport of Emerging Contaminants in the Sacramento-San Joaquin Delta Y. Carrie Guo, Metropolitan Water District of Southern CA	The Recipe for Success – What Makes Liberty Island So Attractive To Native Fish? Lori Smith, USFWS	Climate Change Characterization in California Water Resources Planning Studies Abdul Khan, DWR	Temporal and Spatial Patterns in Benthic Invertebrates in the San Francisco Bay Isa Woo, USGS	Rebuilding Delta Soils: The Balance of Greenhouse Gases Frank Anderson, USGS
8:40 AM	Potential Contributions of Contaminants to the Decline of Pelagic Fishes in the San Francisco Estuary, California Marjorie Brooks, Southern Illinois University	Effects of a Restored Freshwater Tidal Wetland Complex on Pelagic Habitat for Imperiled Native Fish Gina Benigno, DWR	Statistical Downscaling of CMIP5 Global Climate Model Simulations for Use in Bay Area Regional Impact Studies Bridget Thrasher, Climate Central	Acute and Chronic Toxicity of Ammonia on *Pseudodiaptomus forbesi* Ida Flores*, UC Davis	Carbon Storage, Gas Fluxes, and Potential Greenhouse Gas Effects of Re-Establishing Wetlands on Organic Soils in the Sacramento-San Joaquin Delta Robin Miller, USGS
9:00 AM	Indicators of Environmental Stressors, Endocrine Disruption, and Physiological Impacts in Wild Fish of the San Francisco Bay Region Jesus A. Reyes, Pacific Coast Environmental Conservancy	Fish Communities at the Interface of Tidal Wetlands and Seasonal Floodplain Kevin Reece, DWR	Modeling Effects of Climate Change on Central Valley Water Demands Michael Tansey, U.S. Bureau of Reclamation	The Physical-Biological Functioning of an Existing Flooded Island: Lessons from a Numerical Model Lisa Lucas, USGS	Trials and Tribulations on Measuring Greenhouse Gas (Carbon Dioxide, Methane And Water Vapor) Fluxes Over a Peatland Pasture and Rice Paddy in the Sacramento-San Joaquin Delta Dennis Baldocchi, UC Berkeley
9:20 AM	From Otoliths to Oocytes: A Three-Tiered Investigation into Estrogenic and Androgenic Effects in a California Estuary Susanne Brander*, UC Davis	Habitat Associations and Macro-benthos Interactions of the Non-Native, Invasive Asian Clam, *Corbicula fluminea*, at Liberty Island, a Restoring Freshwater Tidal Marsh, Sacramento River Delta Errin Kramer-Wilt*, University of Washington	Potential Responses of Sierra Nevada Flood Frequencies to Climate Change Tapash Das, Scripps Institution of Oceanography	Spring 2010 Phytoplankton Blooms in Northern San Francisco Estuary: Influences of Climate and Nutrients Al Marchi, SF State University – RTC	Recent Advances in Subsidence Measurement and Mitigation Steven Deverel, HydroFocus, Inc.
9:40 AM	The Effect of Triclosan on Whole Animal Responses and Gene Transcription in Larval Fathead Minnow (*Pimephales promelas*) Erika Holland*, UC Davis	Monitoring and Mapping Plant Ecophysiology and Vegetation Succession in a Flooded Island Using Airborne Imaging Spectroscopy Erin Hestir, UC Davis	Planning for Water Resources System Re-Operation due to Climate Change Michael Anderson, DWR	Novel Application of Microscale Aggregate Culture of Hepatocytes to Screen for Harmful Cyanobacterial Bloom Toxins Amber Roegner*, UC Davis	Sediment Accretion and Carbon Sequestration in San Francisco Bay Salt and Brackish Tidal Wetlands John Callaway, USF
10:00 AM	**BREAK—3RD FLOOR LOBBY**				
	Pesticides Amanda Montgomery, CVRWQCB	**Cache Slough Complex (II)** Gina Benigno, DWR	**Addressing Climate Change in Delta Planning and Management (II)** Elissa Lynn, DWR	**Food Webs (II)** Michelle Shouse, USGS	**Invasives** Ronald Smith, USFWS
10:20 AM	Occurrence of Pyrethroid Insecticides in Water, Sediment and Biota Michelle Hladik, USGS	The Historical Yolo Basin Landscape Alison Whipple, SFEI	Incorporating Climate Variability, Change, and Model Uncertainty in Scenarios for California Water Planning Armin Munevar, CH2M HILL	Metabolic Responses to Environmental Salinity in the Invasive Clam *Corbula amurensis* Adam Paganini, SF State University – RTC	Nutrient Loading and Benthic Native-Invasive Species Dynamics Heidi Weiskel*, UC Davis

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Wednesday, September 29 (*continued*)

	Room 306 **Water Quality**	Room 307 **Habitats And Restoration**	Room 308–310 **Long-Term Challenges**	Room 311–313 **Species And Communities**	Room 314 **Integrated Science And Management**
10:40 AM	Anatomy of a Rain Event: Urban Runoff and Toxicity in the American River throughout a Winter Storm Donald Weston, UC Berkeley	Changing Agricultural Pesticide Use and the Implications to Native Fish in the Yolo Bypass Kelly Smalling, USGS	Regional Hydrologic and Water Management System Responses to Climate Futures Armin Munevar, CH2M HILL	Spatial and Temporal Variation in Selenium Concentrations in the Invasive Clam *Corbula Amurensis* in the San Francisco Bay Estuary from 1995 to 2010 Robin Stewart, USGS	Physical Interactions between Floating Macrophytes and Environmental Flows: Implications for Invasive Plant Management in the Delta Maureen Downing-Kunz*, UC Berkeley
11:00 AM	Recent Advances in the Analysis of Pyrethroid Insecticides in Surface Water and Sediments Abdou Mekebri, DFG	Sedimentation Processes and Turbidities Favoring Endangered Fish, Northern Sacramento-San Joaquin River Delta Tara Morgan-King, USGS	3-D Simulation of Sea Level Rise for the Bay Delta Conservation Plan Michael MacWilliams, River Modeling	Grazing Impact of the Overbite Clam on the Microzooplankton Assemblage of the San Francisco Estuary Valerie Greene*, Romberg Tiburon Center/USGS	Evaluating the Potential for Spread of an Invasive Forb, *Limonium ramosissimum, in San* Francisco Bay Salt Marshes Gavin Archbald*, San Francisco State University
11:20 AM	Evaluation of Acute Toxicity of Chlorpyrifos, Permethrin and Bifenthrin on the Copepods *Eurytemora affinis* and *Pseudodiaptomus forbesi* of the San Francisco Estuary Sarah Lesmeister*, UC Davis	BREACH III Physical Processes: Hydrodynamics and Wind/Wave Interactions Matt Brennan, Phillip Williams & Associates	Simulation of Hydrodynamic Responses for Evaluation of Infrastructure and Restoration Investment Risks under Climate Change John DeGeorge, Resource Management Associates, Inc.	Clams, Fish, Shrimp, Birds, and Phytoplankton: Causes and Effects of Seasonal and Interannual Variability in Clam Biomass and Grazing in the Northern San Francisco Estuary. Janet Thompson, USGS	Quagga and Zebra Mussels in the Western U.S.: Invasion and Response 2007-2010 Andrew Cohen, CRAB
11:40 AM	Trends in Pesticide Concentrations in Five Streams of the California Central Valley, 1993-2005 Hank Johnson, USGS	The Breach III study: 1 year down, 2 years still to come – What We Have Learned So Far and Where We Hope to be at the End Peter Hrodey, USFWS	PRISM-based Downscaled Global Climate Models for California Climate Change Impact Research Bridget Thrasher, Climate Central, Inc.	Biomass Trends in a Bivalve at a DWR Long Term Monitoring Site in the Sacramento-San Joaquin Delta Karen Gehrts, DWR	Invasive Species Risk Assessment and Planning – A Tool to Reduce the Risk of Spreading Invasive Species in Natural Resource Management Activities Jonathan Thompson, USFWS
12:00–1:00 PM	**LUNCH—EXHIBIT HALL B (1ST FLOOR)**				
	Nutrients Sam Harader, Delta Science Program	**River and Wetland Restoration (I)** Mark Gard, USFWS	**Addressing Climate Change in Delta Planning and Management (III)** Jamie Anderson, DWR	**Species and Communities (I)** Larry Brown, USGS	**Human Modified Systems** Darcy Austin, USGS
1:00 PM	Assessment of Excess N2 and Groundwater N2O in the San Joaquin River Sarra Hinshaw, UC Davis	The Framework for Restoration Monitoring at the Merced River Ranch Ayesha Gray, Cramer Fish Sciences	Potential Impacts of Climate Change on the Upper Feather River Basin Hydrology Tariq Kadir, DWR	Application of a Winter Run Chinook Life-Cycle Model to Evaluate Conservation Measures and Proposed Water Project Operations Bradley Cavallo, Cramer Fish Sciences	An Evaluation of the Hydrodynamic and Salinity Impacts Resulting from the Deepening of the Sacramento Deep Water Ship Channel Michael MacWilliams, River Modeling
1:20 PM	Simulating Salt and Nitrate Water Quality in California's Central Valley Joel Herr, Systech Water Resources, Inc.	Conceptual Approach for Process-based Restoration in Regulated Central Valley Rivers Clark Watry, Cramer Fish Sciences	Estimating Future Habitat Resiliency and Water Availability in the North Bay Region Using Fine-scale Modeling Lorraine Flint, USGS	Development of Flow and Thermal Regimes for Spring-run Chinook Salmon in Clear Creek Li-Ming He, NOAA Fisheries	Transport Mechanisms in the Stockton Deep Water Ship Channel: A Three-Dimensional Tracer and Modeling Study Laura Doyle, UC Davis
1:40 PM	Using a Stable Isotope Mass Balance Approach to Identify Nitrate Sources and Sinks in the San Joaquin River Megan Young, USGS	Restoring Riparian Habitat on Altered Floodplains by Integrating Vegetation and Avian Monitoring Ryan Burnett, PRBO Conservation Science	Climate Change and Spring-Run Chinook Salmon in California: Scenario Analysis of Flow and Temperature Changes for Butte Creek, California Marisa Escobar-Arias, Stockholm Environment Institute	Biological Communities in San Francisco Bay Track a North Pacific Climate Shift Teresa Jacobson*, UC Santa Cruz	A Comparison between the Sacramento and Mississippi Delta Levee Systems Sam Miller, DWR

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Wednesday, September 29 (*continued*)

	Room 306 **Water Quality**	Room 307 **Habitats And Restoration**	Room 308–310 **Long-Term Challenges**	Room 311–313 **Species And Communities**	Room 314 **Integrated Science And Management**
2:00 PM	Causes of Temporal and Spatial Variations in Nitrification Rates in the Sacramento River and Delta Carol Kendall, USGS	Implementing at the Project Scale to Inform Science-Based Regional Wetland Restoration: The Dutch Slough Tidal Marsh Restoration in the Sacramento-San Joaquin Delta Michelle Orr, Philip Williams & Associates, Ltd.	Climate Change and Spring-Run Chinook Salmon in California: Predictions of Salmon Responses in Butte Creek, CA from Coupled Watershed and Population Dynamics Models Lisa Thompson, UC Davis	Evaluating the Effects of Projected Sea-Level Rise on Endemic Tidal Marsh Species in San Francisco Bay Estuary: An Interdisciplinary Approach John Takekawa, USGS	Water Resources Sensitivity to Climate Change, Land Use Change, and Population Growth in the Stanislaus, Tuolumne and Merced Basins Michael Kiparsky*, UC Berkeley
2:20 PM	Linking Nutrients to Severe Delta Eutrophication, 2009/2010 Findings Thomas Lindemuth, Delta Science Center	Improving Watershed Health through Large-Scale Wetland Restoration Lorraine Parsons, Point Reyes National Seashore	Implications of Changing Salmon Dynamics to the Butte Creek Food Web Melanie Truan, UC Davis	Life History Diversity within Spring-Run Chinook Salmon Populations Corey Phillis*, UC Santa Cruz	Anthropogenic Influences on Recent Bathymetric Change in West-Central San Francisco Bay and Implications for Beach Sustainability Patrick Barnard, USGS
2:40 PM	**BREAK—3RD FLOOR LOBBY**				
	Nutrients and Organic Matter Cliff Dahm, Delta Science Program	**Restoration and Fish** John Netto, USFWS	**Addressing Climate Change in Delta Planning and Management (IV)** Tapash Das, Scripps Institute of Oceanography	**Species and Communities (II)** Isa Woo, USGS	**Fish Survival and Management** Anke Mueller-Solger, IEP
3:00 PM	Review of the Potential Benefits of Controlling Phosphorus Discharges in Mud and Salt Sloughs on SJR/Delta Water Quality G. Fred Lee, G. Fred Lee & Associates	The Larinier Fish Passage: Implementing "New" Technology to Facilitate Steelhead Fisheries Restoration in Alameda Creek Flood Control Channel Meabon Burns, CH2M HILL	Development of Water Evaluation and Planning System (WEAP21) Weekly Hydrologic Models for West-Slope Sierra Nevada Watersheds Charles Young, Stockholm Environment Institute	The History of Native Oysters in San Francisco Bay: Implications for Restoration Andrew Cohen, CRAB	Survival of Juvenile Late-fall Chinook Salmon using Different Migration Routes to Negotiate the Sacramento-San Joaquin River Delta Russell Perry, University of Washington
3:20 PM	Agricultural Impacts on Stream DOC in a Sacramento River Valley Watershed Peter Hernes, UC Davis	Habitat Restoration in the San Francisco Estuary to Increase Salmonid Smolt Foraging Opportunities Robert Abbott, ENVIRON International Corp	Simulating Regulated Flows in the West Slope Sierra Nevada with Uniform Climate Warming of 2, 4, and 6 °C Using WEAP21 David Rheinheimer*, UC Davis	Going With the Flow or Staying Close to Home? Population Connectivity, Freshwater Flow, and Native Oyster Restoration in San Francisco Bay Andrew Chang, UC Davis	Juvenile Salmonid Habitat Use of Stream Channel Restoration in Clear Creek: Longer-term Observations Related to Sustainability Matt Brown, USFWS
3:40 PM	Linking Trends in Low Dissolved Oxygen Events with Dissolved Organic Matter Quality Using Optical Properties Measurements in Northern Suisun Marsh Bryan Downing, USGS	Evaluating a Spawning Habitat Enhancement Project: Improving Benthic Macroinvertebrate Production in Gravel Augmentation Areas to Benefit Juvenile Salmonid Rearing Habitat Quality Benjamin Rook, Cramer Fish Sciences	Characterization of the Unregulated Spring Snowmelt Recession in the Western Sierra Nevada, California and Simulated Changes in WEAP21 with Regional Climate Warming from the Feather to the Kern River Joshua Viers, UC Davis	Migration Timing, Abundance and Distribution of Sandhill Cranes in the Sacramento-San Joaquin Delta of California Gary Ivey, Oregon State University	Winter OBAN: A Statistical Life-Cycle Model for Winter-Run Chinook Noble Hendrix, R2 Resource Consultants, Inc.
4:00 PM	Seeing the Light: Applications of In Situ Optical Measurements for Understanding Water Quality in Rivers, Deltas, and Estuaries Brian Bergamaschi, USGS	Evaluating a Spawning Habitat Enhancement Project: Restoring Ecological Processes and Improving Habitat Quality to Benefit Native Salmonids Jesse Anderson, Cramer Fish Sciences	Development of RTEMP, A Weekly Numerical Model Representing Unimpaired Equilibrium Water Temperature Conditions for West-Slope Sierra Nevada Streams and Rivers Stacy Tanaka, Watercourse Engineering, Inc.	Wintering Shorebirds in the San Francisco Bay Estuary: Population Change and Future Monitoring Matthew Reiter, PRBO Conservation Science	Quantifying Flow and Temperature Effects on Production of Central Valley Steelhead Ian Courter, Cramer Fish Sciences
4:20 PM	Do Reservoirs Improve or Exacerbate Drinking Water Quality: The Balance between Loss of Terrestrial Derived Material and Addition of Algal Derived Material in San Luis Reservoir Tamara Kraus, USGS	Monitoring the Effectiveness of CVPIA Dedicated Yield in Reducing Redd Dewatering Mark Gard, USFWS	River Temperature Impacts and Resiliency to Climate Warming in California's Sierra Nevada Sarah Null, UC Davis	Habitat Sustainability for an Endangered Songbird: A Case Study on the Sacramento River Steven E. Greco, UC Davis	**Q & A**
4:40–4:45 PM	**EVALUATION FORM SUBMISSION AND RAFFLE (3RD FLOOR LOBBY)**				

** Denotes student presenter*

Poster Sessions

Poster Clusters

Listed by Presenting Author

Aquatic Plant Communities in the Sacramento-San Joaquin River Delta: Ecological and Monitoring Challenges

Aquatic Plant Communities in the Sacramento-San Joaquin River Delta: Ecological and Monitoring Challenges
Erin Hestir, UC Davis

Competition and Niche Limitations Determine the Pathway of Aquatic Plant Succession in the Delta?
Susan Ustin, UC Davis

Differences in Vegetative Morphology of *Egeria densa* Influenced by Submerged Aquatic Vegetation Community Composition
Erin Hestir, UC Davis

Monthly Patterns of Submerged Species Composition and Biomass in the Sacramento San Joaquin River Delta
Erin Hestir*, UC Davis

Imaging Spectroscopy Elucidates Functional Dissimilarity Between Native and Non-Native Plant Species in the Aquatic Environment
Erin Hestir, UC Davis

Vegetation Community Dynamics Relative to the Changing Distribution of Water Hyacinth in the Sacramento-San Joaquin Delta
Shruti Khanna, UC Davis

Cache Slough Complex

BREACH III: Identifying and Quantifying the Factors Influencing Elevation Change
Denise Reed, University of New Orleans

Constraints on the Expansion of *Schoenoplectus californicus* (Tule) in the Liberty Island Wetland System
Mark Hester, University of Louisiana

Nekton Response in Breach III: Evaluating and Predicting 'Restoration Thresholds' in Evolving Freshwater-Tidal Marshes
Kate L. Olsen, Washington State University-Vancouver

Breech III: Long-Term High Frequency Measurement of Phytoplankton Carbon Flux Among Ponds in the Liberty Island Wetland, CA
Peggy Lehman, DWR

Watershed Process Model Development for Liberty Island, CA
Enrique Reyes, East Carolina University

BREACH III: Response of Benthic Macroinvertebrates and Insects to Vegetation Colonization and Geomorphic Changes at Liberty Island, a Restoring Wetland in the Sacramento River Delta
Errin Kramer-Wilt, University of Washington

Assemblage and Diet of Native and Non-Native Nearshore Fishes in a Restoring Wetland in the Northern Sacramento-San Joaquin Delta, California
Kate L. Olsen, Washington State University-Vancouver

Hydrologic Connectivity Was a Key Factor Affecting Material Flux Among Vegetated and Non-Vegetated Ponds in the Freshwater Tidal Wetland, Liberty Island, CA
Peggy Lehman, DWR

Pelagic Macroinvertebrates of the Cache Slough Complex
Caily Nelson, DWR

Sacramento River Monitoring and Assessment

Effectiveness Monitoring for the Sacramento River Riparian System
Fraser Shilling, UC Davis

An Ecological Scorecard for Sacramento River Terrestrial Flora, Fauna and Channel Dynamics
Gregory Golet, TNC

Meander Bend Characteristics 1904-2007 on the Upper Sacramento River
Eric Larsen, UC Davis

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Poster Sessions

General Sessions

Listed by Presenting Author

Fish Biology, Ecology and Protection

The Effect of Tidal Stage on Fish Abundance in Near Shore Habitat
Amber Aguilera, USFWS

San Francisco Bay Survey of Non-Indigenous Aquatic Species
Karen Bigham, DFG

Comparison of Race Using Length at Date Criterion and Genetics for Catch of Juvenile Chinook Salmon at Sacramento and Chipps Island in 2007-2008
Patricia Brandes, USFWS

An Investigation on the Sub-Lethal Effects of Pesticides on *Ceriodaphnia dubia*
Krista Callinan*, UC Davis

Longer-Term Observations Related to Sustainability of Stream Channel Restoration in Clear Creek: Juvenile Salmonid Habitat Use
David Colby, USFWS

Movement of Outmigrating Salmonid Smolts in Relation to Dredged and Dredged Material Placement Sites in the San Francisco Bay Estuary
Alex Hearn, UC Davis

Implications of Seasonal Migration Impediments on Green Sturgeon on the Sacramento River
Joshua Israel, USBR

Fine-Scale Three-Dimensional Tracking of Fish Behavior in Central California Using Acoustic Tags
Samuel Johnston, HTI Hydroacoustic Technology

Suture Assessment and Recovery of Sub-Adult Striped Bass (*Morone saxatilis*) Surgically Implanted with Acoustic Transmitters
Cynthia LeDoux-Bloom, DWR

Effects of Dietary Methylmercury Chloride on the Growth Performances and Tissue Burdens in Juvenile Green (*Acipenser medirostris*) and White Sturgeon (*A. Transmontanus*)
Jang-Won Lee*, UC Davis

Selenium Tissue Burden in Resident White Sturgeon (*Acipenser transmontanus*) of the San Francisco Bay Delta Estuary
Javier Linares-Casenave, USFWS

Delta Smelt Spawning and Turbidity Patterns
Francine Mejia, DWR

They're Dying, but are They Sick?
Ken Nichols, USFWS

Use of the Sacramento/San Joaquin Estuary by Fry-Sized Emigrants: Implications for Life History Diversity and Conservation of Central Valley Fall-Run Chinook Salmon
Yvette Redler, NOAA Fisheries

Sacramento River Steelhead Trout: Comparing Natural and Hatchery Smolts
Philip Sandstrom*, UC Davis

Monitoring of Harmful Algal Blooms and Potential Impacts to Fish Health in the San Francisco Estuary
Swee Teh, UC Davis

Fine Scale Movements of Adult Green Sturgeon in the Sacramento River
Michael Thomas, UC Davis

Hatchery Or Natural? A Fourfold Analysis of Mokelumne River Chinook Salmon
J.D. Wikert, USFWS

Size Does Matter: Gravel Size and Chinook Salmon Egg Survival
J.D. Wikert, USFWS

Flood Management

Scenarios for Restoring Ecologically Functional Floodplains and Providing Ecosystem Services in the Sacramento-San Joaquin Delta
Mary Matella*, UC Berkeley

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Food Webs

The Growth and Development of Calanoid Copeæpods in the Food Limited San Francisco Estuary
Toni Ignoffo, SFSU–Romberg Tiburon Center

Nutrient Loading Effects on Phytoplankton Community Structure and Biomass in the Sacramento and San Joaquin Rivers.
Erica Kress*, SFSU–Romberg Tiburon Center

The Use of Flowcam Technology to Quantify Real Time Changes in Phytoplankton Communities in the Delta
Peggy Lehman, DWR

How Climate Change May Impact San Francisco Bay-Delta Wetlands and Their Links to Pelagic Food Webs
V. Thomas Parker, California State University, San Francisco

Abundance, Composition, Feeding, and Reproductive Rates of Key Copepod Species in the Food-Limited Low Salinity Zone of the San Francisco Estuary
Anne Slaughter, California State University, San Francisco

Shifts in Zooplankton Community Structure: Implications for Food-Web Processes in the San Francisco Estuary
Monika Winder, UC Davis

Human Consequences

Uncertain Waters: Navigating California's Water Priorities with Communities
Jodi Cassell, UC Cooperative Extension

Managing an Uncertain Future: Climate Change at the California Department of Water Resources
Elissa Lynn, DWR

Integrative Applied Science

San Francisco Estuary and Watershed Science
Sam Luoma, UC Davis

Estimating Channel Vulnerability to Erosion
Barbara Washburn, Office of Environmental Health Hazard Assessment

Biological Pattern Recognition and Morphometrics to Passively 'Mark' Fish and Improve Data Collection Quality
Clark Watry, Cramer Fish Sciences

Control and Management of Perennial Pepperweed Invasion: An Obtainable Goal?
Christine Whitcraft, CSU Long Beach

Modeling

Development of a Sediment and Transport Module for the DSM2 Delta Simulation Model
Jamie Anderson, DWR

Modeling Food Delivery Dynamics for Juvenile Salmonids under Variable Flow Regimes
Lee Harrison, UC Santa Barbara

Application of WARMF Watershed Model to Determine Sources of Salt and Organic Carbon Entering the Delta from the Sacramento River
Joel Herr, Systech Water Resources, Inc.

Modeling the Effect of Wind on Mean Circulations in South San Francisco Bay
Rusty Holleman*, UC BerkeleySpatial and Temporal

Quantification of Pesticide Loadings to the Sacramento River, San Joaquin River, and Bay-Delta to Guide Risk Assessment for Sensitive Species—Part II: Development of Modeling Scenarios to Compute Edge-of-Field Loadings
Gerco Hoogeweg, Waterborne Environment, Inc.

Evaluation of Potential Conflicts Between Protection of Winter-Run Chinook Salmon and Delta Smelt
Brett Kawakami, Contra Costa Water District
Management of Environmental Selenium: Underlying Science and Quantitative Answers
Theresa Presser, USGS

Integrating Biological and Physical Processes to Predict the Impact of Sea-Level Rise on Tidal Marsh Habitat
Kathleen Swanson, USGS

Spatial and Temporal Quantification of Pesticide Loadings to the Sacramento River, San Joaquin River, and Bay-Delta to Guide Risk Assessment for Sensitive Species—Part I: Project Status
Marty Williams, Waterborne Environment, Inc.

Physical Processes

Advancements in Bathymetric Data Collection, Storage, and Dissemination
Shawn Mayr, DWR

Surficial Geology of the Northern Sacramento – San Joaquin Delta, Recognizing Deposits, Landforms, and Sedimentary Environments and Their Relevance to Science and Engineering
Justin Pearce, W. Lettis & Associates

Bathymetric Surveys of Ponds 3, 4, and 5 in the Napa-Sonoma Marshes
Lacy Smith, USGS

Holocene Hydrologic Variability in the Western Sierra Nevada From D/H Ratios in Leaf Waxes
Joseph Street*, UC Santa Cruz

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Species and Communities

Growth Rates of Eelgrass (*Zostera marina*) in San Francisco Bay and Tomales Bay, and Associated Invertebrate Population Densities
DeAnna Beach*, CSU-East Bay

Connectivity Within and Between Black Rail Metapopulations in the Bay-Delta and Sierra Foothills: Implications for Persisting Under Rising Sea-Levels
Steven Beissinger, UC Berkeley

Effects of Invasive *Limonium ramosissimum* on Native Salt Marsh Communities in a Changing Environment
Autumn Cleave*, SFSU - Romberg Tiburon Center

Survival of Rehabilitated Surf Scoters Oiled during the Cosco Busan Spill on San Francisco Bay
Susan De La Cruz, USGS

Cryptic *Spartina alterniflora x foliosa* Hybrids: the Challenge of Eradicating Invasive Hybrids in a Widespread Native Plant Population
Laura Feinstein, UC Davis

Drivers of Pioneer Riparian Forest Establishment within Abandoned Channel Refugia
Maya Hayden*, UC Berkeley

Comparison of Winter Movements Between Greater and Lesser Sandhill Cranes in California
Gary Ivey, Oregon State University

Effects of Heat Waves on the Macroinvertebrate Community of San Francisco Bay Eelgrass (*Zostera marina*) Beds
Jeffrey Lewis*, SFSU - Romberg Tiburon Center

Sensitivity Comparison of Indigenous Species to Standard Model Species of Fish and Invertebrates
Daniel Markiewicz, UC Davis

Tidal Wetland Vegetation Diversity Gradients Across and Within Sites in the San Francisco Bay Estuary
Lisa Schile*, UC Berkeley

Trends in Abundance and Size of Delta Smelt and Longfin Smelt and the Influence of Environmental Conditions
Lori Smith, USFWS

Evaluating the Effects of Projected Sea-Level Rise on Salt Marsh Endemic Listed Species of the San Pablo Bay National Wildlife Refuge, CA
Karen Thorne, USGS

Sustainable Habitats and Ecosystems

Below-Ground Biomass Dynamics Across the San Francisco Bay-Delta: Organic and Mineral Matter Contributions to Tidal Wetland Accretion
Evyan Borgnis, USF

Biohaven® Floating Islands to Enhance the Ecology of the Sacramento-San Joaquin Delta and San Francisco Bay
Robert Bugg, Consulting Biologist

Is There a Synergistic Effect of Thermal and Osmotic Stress on Metabolic Performance in Freshwater Zooplankton?
Xi Chen*, SFSU - Romberg Tiburon Center

Using Long-Term Monitoring of Horticultural Performance as a Measure of Restoration Success
Jessica Hammond, River Partners

Habitat Creation along Lower Sacramento River Levees
Patrick Reynolds, H. T. Harvey & Associates

Post-Restoration Plant Community Assembly Patterns on the Giacomini Wetland Restoration Project
Amelia Ryan, National Park Service

Incorporating Economic Costs into Wildlife Habitat Management: Examples from Central Valley Riparian Restoration and Wetlands
Nathaniel Seavy, PRBO Conservation Science

Successful Restoration of Endangered Species Habitat in Suisun Marsh
Joshua Tallis, Arcadis

Water and Sediment Quality

Quantifying the Effectiveness of Remediation at Gambonini Mercury Mine in California Coast Range
Carrie Austin, San Francisco Bay Waterboard

Effect of Diuron and Imazapyr Herbicides on Phytoplankton in the San Francisco Estuary
Sarah Blaser*, SFSU - Romberg Tiburon Center

Copper Speciation in the San Francisco Bay Delta and Estuary: Evaluating Current and Future Likelihood of Copper Toxicity Events in a Perturbed Ecosystem
Kristen Buck, Delta Science Program

Trend Analysis of Organic Carbon Concentrations in the Sacramento-San Joaquin Delta
Joe Christen, DWR

Evaluating the Suitability of *Hyalella azteca* Water Column Tests for the Detection of Insecticide Toxicity
Linda Deanovic, UC Davis

Fatty Acid Production and Decomposition in the State Water Project
Robert Eckard*, UC Davis

Methylmercury and Organic Matter in Delta Wetlands: Observed Trends, Linkages and Management Impacts
Jacob Fleck, USGS

Sediment Quality Assessment in Tidal Salt Marshes in Northern California: An Evaluation of Multiple Lines of Evidence Approach
Hyun-Min Hwang, UC Davis

Central Valley Monitoring Directory: Web-Based Data Upload and Access Tool
Thomas Jabusch, SFEI

Evaluation of Contaminants and Endocrine Disruption in the Sacramento–San Joaquin Estuary, CA, USA
Catherine Johnson, USFWS

Spatial and Temporal Variation in the Biodegradation of Organophosphate Pesticides in Riparian Wetlands in Agricultural Watersheds
Ekrem Karpuzcu*, UC Berkeley

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Water and Sediment Quality (*continued*)

Seasonal and Spatial Variation in Water Chemistry and Isotopes in the Sacramento River, Delta, and Eastern San Francisco Bay
Carol Kendall, USGS

Hydrologic Fluctuation and Oxidation/Reduction Potential in Wetland Surficial Sediment: Implications for Methyl Mercury Production
Phillip Lebednik, Arcadis

Lower American River and Lake Natoma Methylmercury TMDL Public Participation
Stephen Louie, CVRWQCB

Factors Affecting the Bioavailability of Methylmercury to Phytoplankton and Amphipods
Allison Luengen, USF

Hydrodynamic and Salinity Modeling of the Sacramento River Deep Water Ship Channel
Susan Ma, USACE - San Francisco District

Partitioning of Sediment-Associated Organic Matter in the Agricultural Willow Slough Watershed: Quantitative and Qualitative Characterization
Sandrine Matiasek*, UC Davis

Effects of Diuron on Algal Growth: Comparison of Algal Bioassay and Grow-out Experiments
Stella McMillin, DFG

Dissolved Oxygen Monitoring in the Stockton Ship Channel for 2008 and 2009
Brianne Noble, DWR

The Lathrop Urban Drainage Study: Preliminary Results
Rachel Pisor, DWR

Sources of Organic Carbon to Reservoirs Impounded by Dams Using Englebright Lake as a Model System
Christina Pondell*, Virginia Institute of Marine Science

Flame-Retardants and *Daphnia magna*
Leona Scanlan*, UC Berkeley

Isotopic Trends of Nutrient Cycling and Assimilation Downstream of the Sacramento Regional Wastewater Treatment Plant
Steven Silva, USGS

California DWR's Real-Time Data and Forecasting Project: Linking Water Quality Monitoring, Modeling, and Communication
Ted Swift, DWR

Water Supplies and Instream Flows

North Bay Water Reuse Program
Kevin Booker, Sonoma County Water Agency

Watersheds

The Anadromous Fish Restoration Program: A Status Update
Ramon Martin, USFWS

Riparian Sanctuary: Interest-Based Collaboration Model for Pumping Plant Protection and Riparian Restoration on the Sacramento River
Michael Rogner, River Partners

Quantitative Parameters of Change: Contrasting Historical Fluvial Systems and Urban Drainage Systems in the San Francisco Bay Area
Janet Sowers, Fugro William Lettis & Associates, Inc

Analysis of Impervious Cover: Development of a Set of Impervious Surface Coefficients for California's Land Uses
Barbara Washburn, Office of Environmental Health Hazard Assessment

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